

IN THE CLAIMS:

Please cancel claims 13-14 without prejudice.

1. (Currently Amended) An apparatus ~~Apparatus designed to examine for examining~~
a surface (9), comprising

a polarization analyser element ~~or analyser (14)~~ placed in the path of a light beam (17)
reflected by the said surface[[,]]; ~~characterized in that it comprises~~

a means for taking digital images (13) placed in the path of the beam reflected by the said
surface downstream of the polarization analyser element[[,]]; and

a processing unit (15) capable of calculating the brightness and the intensity of a plurality
of points of the said surface from pixels of at least two images of the said surface;
wherein the apparatus does not contact the surface.

2. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 1,
~~characterized in that comprises~~ further comprising a source of polarized light capable of emitting
a beam (16) incident on the said surface to be examined.

3. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 2,
~~characterized in that~~ wherein the light emanating from the said source is substantially isotropic.

4. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 2,
~~characterized in that~~ wherein the light emanating from the said source is substantially white.

5. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 2, ~~characterized in that~~ wherein the spectrum of the light emanating from the ~~said~~ source is substantially the same as the solar spectrum.

6. (Currently Amended) An apparatus ~~Apparatus~~ according to claim 1, ~~characterized in that~~ wherein the polarization analyser element comprises a means for transmitting the crossed polarization and a means for transmitting the parallel polarization, the ~~said~~ transmission means being alternatively active.

C7 7. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 6, ~~characterized in that~~ wherein the polarization analyser element is ~~rotating~~ rotatable.

8. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 6, ~~characterized in that~~ the polarization analyser element further comprises an electrical switching means.

9. (Currently Amended) A process for the ~~remote~~ non-contact examination of a surface, comprising:

- (i) analysing the polarization of a light beam reflected by the ~~said~~ surface;
- (ii) taking digital images of particular polarizations of the ~~said~~ reflected beam; and
- (iii) calculating the brightness and the intensity of a plurality of points of the ~~said~~ surface from pixels of at least two images of the ~~said~~ surface.

10. (Currently Amended) A process ~~Process~~ according to Claim 9, ~~in which~~ wherein the ~~said~~ surface is uneven.

11. (Currently Amended) A process ~~Process~~ according to Claim 9, ~~in which~~ wherein the digital images are polychromic digital images.

12. (Amended) A process ~~Process~~ according to Claim 9, ~~in which~~ wherein the digital images are polychromic digital images ~~are taken~~.

C7

13. (Cancelled)

14. (Cancelled)

15. (Currently Amended) An apparatus ~~Apparatus designed to examine~~ for examining a surface comprising

a polarization analyzer element ~~or analyzer~~ placed in the path of a light beam reflected by the ~~said~~ surface[[,]];

a means for taking digital images placed in the path of the beam reflected by the ~~said~~ surface downstream of the polarization analyzer element[[,]]; and

a processing unit capable of calculating the brightness and the intensity of a plurality of points of the ~~said~~ surface from pixels of at least two images of the ~~said~~ surface; wherein the apparatus does not contact the surface.

16. (Currently Amended) An apparatus ~~Apparatus designed to examine for examining~~ a surface comprising:

a polarisation analyser element ~~or analyser element or analyser~~ placed in the path of ~~a light~~ a light beam reflected by the ~~said~~ surface[.];

a camera for taking digital images placed in the path of the beam reflected by the [said] surface downstream of the polarization analyser element[.]; and

a processing unit capable of calculating the brightness and the intensity of plurality of points of the ~~said~~ surface from pixels of at least two images of the ~~said~~ surface;

wherein the apparatus does not contact the surface.

17. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 15 or 16, ~~characterized in that it comprises~~ further comprising a source of polarized light capable of emitting a beam incident on the ~~said~~ surface to be examined.

18. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 17, ~~characterized in that~~ wherein the light emanating from the ~~said~~ source is substantially isotropic.

19. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 15 or 16, ~~characterized in that~~ wherein the light emanating from the ~~said~~ source is substantially white.

20. (Currently Amended) An apparatus according ~~Apparatus~~ to Claim 15 or 16, ~~characterized in that~~ wherein the spectrum of the light emanating from the ~~said~~ source is substantially the same as the solar spectrum.

21. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 15 or 16, ~~characterized in that~~ wherein the analyser comprises a means for transmitting the crossed polarization and a means for transmitting the parallel polarization, the ~~said~~ transmission means being alternatively active.

22. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim 21, ~~characterized in that~~ wherein the analyser is rotating.

23. (Currently Amended) An apparatus ~~Apparatus~~ according to Claim ~~22~~ 21, ~~characterized in that~~ wherein the analyser further comprises an electrical switching means.

C7
Kindly add new claims 25 and 26 as follows:

24. (New) The process of Claim 9, wherein the process is performed by a computer.

25. (New) A computer-readable medium bearing a program code embodied thereon for performing the process of Claim 9.
